

### **REMARKS**

Claims 1-43 are pending and under consideration in the above-identified application.

In the Office Action dated December 4, 2008, the Examiner rejected claims 1-43 and objected to the specification..

With this Amendment, claims 13, 21, 26, 27, 29, 30, 34 , 40-41 and 43 were amended, claims 1-12, 19-20 and 33 were cancelled and claim 44 was added. No new matter had been introduced as a result of the amendments.

#### **I. Objection To Specification**

The Examiner objected to various errors in the Specification. Applicant amended the Specification to correct the errors. Accompanying this response is a Substitute Specification with the noted corrections made. No new matter was introduced as a result of the amendments. Accordingly, the above objection is now moot. As such, Applicant respectfully requests that the above rejection be withdrawn.

#### **II. Double Patenting Rejection of Claims**

Claims 1-43 were provisionally rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims of U.S. Patent Application No. 10/596,139. Applicant reserves the right to file an appropriate terminal disclaimer once claims are allowed.

#### **III. 35 U.S.C. § 102 Anticipation Rejection of Claims**

Claims 1-22, 24-34 and 36-43 are rejected under 35 U.S.C. § 102(b) as being anticipated by Yamada et al., JP 2003 192925 (U.S. Publication No. 2005 0143502) serving as English translation). Applicant respectfully traverses this rejection.

The claims require a biodegradable resin that has a flame retardant additive that includes a phosphorus-containing compound, a hydroxide and a nitrogen oxide having the formula  $N_xO_y$ . The nitrogen oxide present in the flame retardant additive generates combustion obstructive gases, which improves the retardant effect of the flame retardant additive. Specification, Pages 56-57 & Table 6. Additionally, as discussed in the specification, typical flame retardant additives, such as halogen based flame retardant additives do not work well as a flame retardant additive in biodegradable resins because they yield halogen gases upon incineration of the biodegradable material, which are harmful to human beings. Specification, Page 2. The phosphorus-containing compound, which contains phosphorus atoms in the molecule, acts as a superior flame retardant additive for biodegradable resins without the release of any harmful gases. Specification, Pages 2-3 & Table 6.

Yamada et al. teaches a compound that contains a flame retardant additive and a hydrolysis suppressing agent. Yamada et al., abstract. Yamada et al., does not, however teach or even fairly suggest a nitrogen oxide having the formula  $N_xO_y$  as part of the flame retardant additive. Yamada et al. only teaches metal nitrate compounds and cyanurate compounds. Yamada et al., Paragraphs [0038-0039]. As such, Yamada et al. fails to teach or even fairly suggest all the requirements of the claims. Accordingly, Applicant respectfully requests that the above rejection be withdrawn.

#### **IV. 35 U.S.C. § 103 Obviousness Rejection of Claims**

Claims 1-43 were rejected under 35 U.S.C. § 103(a) as being unpatentable over Yamada et al. in view of Yoshida et al. (U.S. Publication No. 2002 0151631). Applicant respectfully traverses this rejection.

Yoshida et al. teaches a nitrogen flame retardant compound for a polymer material. Yoshida et al., Paragraph [0008]. Yoshida et al. does not, however, teach a flame retardant compound for a biodegradable polymer compound as required by the claims. As discussed above, traditional flame retardant additives for polymer compounds were not effective in biodegradable resins. As such, it would not have been obvious to combine the nitrogen flame retardant compound added to a polymer compound with the flame retardant additives taught by Yamada et al., which are directed to biodegradable compounds. Yamada et al., Abstract.

Furthermore, neither Yamada et al. nor Yoshida et al. teach a flame retardant additive that includes a phosphorous containing compound, a hydroxide and a hydroxide and a nitrogen oxide having the formula  $N_xO_y$ . As discussed in the specification, improved flame retardant capabilities are seen when these three compounds are used in combination. Specification, Table 6. As such, the cited references fail to teach or even fairly suggest all the requirements of the claims. Accordingly, Applicant respectfully requests that the above rejection be withdrawn.

**V. Conclusion**

In view of the above amendments and remarks, Applicant submits that all claims are clearly allowable over the cited prior art, and respectfully requests early and favorable notification to that effect.

Respectfully submitted,

Dated: March 4, 2009

By: /Anne K. Wasilchuk/  
Anne K. Wasilchuk  
Registration No. 59,592  
SONNENSCHN NATH & ROSENTHAL LLP  
P.O. Box 061080  
Wacker Drive Station, Sears Tower  
Chicago, Illinois 60606-1080  
(312) 876-8000